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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,148	10/21/2005	Olivier Breguet	NITROS P174US	3255
20210 7590 04/15/2008 DAVIS BUJOLD & Daniels, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301			EXAMINER BASHAW, HEIDI M	
			ART UNIT 3732	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/554,148	Applicant(s) BREGUET, OLIVIER	
	Examiner HEIDI M. BASHAW	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18, 20-26 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 20-26 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Appendix I</u> |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 30-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31 recites the limitation "the vertex angle" in line 18 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-16, 18, 23 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorklund 2,861,341.
5. Re claims 15 and 30, Bjorklund teaches a dental instrument comprising an end section for mounting in a chuck driven by an electric motor, a proximal region adjacent to the end section, a central region extending from the proximal region and a distal region extending from the central region which is capable of guiding the instrument through the root canal and an envelope comprising the proximal region, the central region and the distal regions has a generally inverted cone shape with a widest portion of the envelope corresponding to the distal region and a smallest portion of the

envelope corresponding to the proximal region. The dental instrument further comprises a junction region located between the proximal region and the end section and the junction region comprises an area of the envelope which is capable of breaking in the event that a predetermined drive torque is applied to the envelope during use of the dental instrument (see Appendix I for further explanation). Regarding claim 30, Bjorklund teaches the vertex angle is constant along the entire length of the envelope as illustrated in fig. 2.

6. Re claim 16, Bjorklund teaches the dental instrument wherein the envelope has a truncated cone shape and comprises a vortex angle that is identical along its entire length as illustrated in fig. 2.

7. Re claim 18, Bjorklund teaches the dental instrument wherein an angle of the enveloped relative to an axis of the dental instrument decreases progressively and regularly from the distal region to the proximal region as illustrated in fig. 2.

8. Re claims 23 and 31, Bjorklund teaches the dental instrument wherein the predetermined drive torque is capable of corresponding to a torque at which the distal region of the dental instrument breaks. The claimed limitations are met since the structure taught by Bjorklund is capable of functioning as claimed.

9. Claims 17, 24-26 and 29 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorklund 2,861,341 as applied to claim 15 above, and further in view of Johnson 6,074,209.

10. Re claim 17, Bjorklund teaches the widest vortex angle corresponding to the distal region, a smallest vortex angle corresponding to the proximal region, and one or more intermediate vortex angles corresponding to the central region.

11. Bjorklund does not teach the envelope consists of several juxtaposed sections extending axially from one another and each of the section having a different vortex angle.

12. Johnson teaches the envelope consists of several juxtaposed sections extending axially from one another and each of the section having a different vortex angle as illustrated in figs. 3-4.

13. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Johnson in order to reduce the risk of stalling or locking up during manipulation or rotation of the file as taught by Johnson (col. 2, ll. 48-50).

14. Re claim 24, Bjorklund does not teach the distal region comprises a rounded tip.

15. Johnson teaches the distal region comprises a rounded tip as illustrated in fig. 3.

16. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Johnson in order to clean and shape the canal as taught by Johnson (col. 4, ll. 41-42).

17. Re claim 25, Bjorklund does not teach the central region is polygonal and comprises hollowed flutes with sharp cutting edges that are generally helical.

18. Johnson teaches the central region is polygonal and comprises hollowed flutes with sharp cutting edges that are generally helical as illustrated in fig. 6 (col. 4, ll. 2-6).

19. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Johnson in order to shape and enlarge the canal by cutting away portions of the canal walls as taught by Johnson (col. 4, ll. 9-11).

20. Re claim 29, Bjorklund teaches a dental instrument comprising an end section for mounting in a chuck driven by an electric motor, a proximal region adjacent to the end section, a central region extending from the proximal region and a distal region extending from the central region which is capable of guiding the instrument through the root canal and an envelope comprising the proximal region, the central region and the distal regions has a generally inverted cone shape with a widest portion of the envelope corresponding to the distal region and a smallest portion of the envelope corresponding to the proximal region. The dental instrument further comprises a junction region located between the proximal region and the end section and the junction region comprises an area of the envelope which is capable of breaking in the event that a predetermined drive torque is applied to the envelope during use of the dental instrument (see Appendix I for further explanation). Regarding claim 30, Bjorklund teaches the vertex angle is constant along the entire length of the envelope as illustrated in fig. 2.

21. Bjorklund does not teach the distal region comprises a rounded tip.

22. Johnson teaches the distal region comprises a rounded tip as illustrated in fig. 3.

23. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Johnson in order to clean and shape the canal as taught by Johnson (col. 4, ll. 41-42).

24. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorklund 2,861,341 as applied to claim 15 above, and further in view of Corneo CH 513, 640.

25. Re claim 20, Bjorklund in view of Johnson does not teach the dental instrument wherein the area of the envelope which is designed to break consists of a reduced section adjacent the proximal region of the envelope.

26. Corneo teaches the partial break consists of a portion of reduced section as illustrated in fig. 2

27. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Corneo in order to use a tool to pull out the file once separated from the end section as taught by Corneo (par. 5, ll. 5-7).

28. Re claim 21, Bjorklund does not teach the dental instrument wherein the area of the envelope which is designed to break consists of a modification in one or more of type and structure of material used for the instrument.

29. Corneo teaches the dental instrument wherein the area of the envelope which is designed to break consists of a modification in the structure of material as illustrated in fig. 2.

30. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Corneo in order to use a tool to pull out the file once separated from the end section as taught by Corneo (par. 5, ll. 5-7).

31. Re claim 22, Bjorklund does not teach the dental instrument wherein the area of the envelope which is designed to break consists of at least one peripheral notch formed in the junction region.

32. Corneo teaches the dental instrument wherein the area of the envelope which is designed to break consists of at least one peripheral notch formed in the junction region as illustrated in fig. 2.

33. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Corneo in order to use a tool to pull out the file once separated from the end section as taught by Corneo (par. 5, ll. 5-7).

34. Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorklund 2,861,341 as applied to claim 15 above, and further in view of Berlin 5,876,202.

35. Re claim 26, Bjorklund does not teach the central region is polygonal and comprises flutes that are generally helical.

36. Barton teaches the central region is polygonal and comprises flutes with blunt edges (col. 4, l. 21) that are generally helical as illustrated in fig. 1.

37. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Berlin in order to produce a non-cutting edge as taught by Berlin (col. 2, ll. 55-56).

38. Re claim 28, Bjorklund does not teach the central region comprises helical section and rectilinear sections.

39. Berlin teaches the central region comprises helical section and rectilinear sections as illustrated in fig. 4 (col. 4, ll. 27-28).

40. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Bjorklund in view of Berlin in order to reduce the screwing-in tendency of tool land thus avoiding blockages which are sources of tool breakage as taught by Berlin (col. 4, ll. 32-34).

Response to Arguments

41. Applicant's arguments with respect to claims 15-18, 20-26 and 28-31 have been considered but are moot in view of the new ground(s) of rejection.

42. The recitation flexible dental instrument and being manufacture from titanium nickel has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEIDI M. BASHAW whose telephone number is (571)270-3081. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heidi Bashaw
Examiner
Art Unit 3732

/John J Wilson/
Primary Examiner
Art Unit 3732

HMB

Art Unit: 3732

Appendix I

